REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has added new claims 15 and 16. Thus, claims 1-16 are now pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

Claims 1, 2, 7, 8 and 14 are rejected under 35 U.S.C. § 102(e) as being anticipated by newly cited Wils et al. (USP 6,397,260; hereafter "Wils"). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wils in view of Erekson el al. (USP 6,836,862; hereafter "Erekson"). Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wils in view of Erekson and newly cited Lynch et al. (USP 5,586,338; hereafter "Lynch"). Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wils in view of Johansson (USP 6,975,613). Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wils in view of Ying. Claims 10-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wils in view of Ying, Akyol et al. (USP 6,701,448; hereafter "Akyol") and official notice. Applicant respectfully traverses the prior art rejections.

Disclosure of Wils

Wils discloses a network including hosts H1, H2, H3 and H4 connected to an IP subnetwork SUBNET 1. Two routers R1 and R2 are connected to the subnetwork SUBNET 1 and a second subnetwork SUBNET 2. Each of the routers R1 and R2 are configured to implement two Virtual Routers A and B.

In the embodiment shown in FIG. 2, the router R1 is the Master for Virtual Router A and a Backup for Virtual Router B, while the router R2 is Master for Virtual Router B and a Backup for Virtual Router A. In the case where the single Master router is backed up by multiple Backup routers, the Backup routers are assigned different priorities for assuming Master status when necessary, as described in RFC 2338. The Master periodically broadcasts a Virtual Router Redundancy Protocol (VRRP) Advertisement message to inform the other (Backup) routers that it is available. Each Backup router monitors VRRP Advertisements broadcast by the Master in order to be aware of the Master's availability. If a Backup router determines that the Master's activity has ceased, it acquires the status of Master if its priority is higher than the other Backup routers for the Virtual Router.

In the embodiment shown in FIG. 3, the routers R1 and R2 are configured to participate in multiple Virtual Routers designated Virtual Router VRA and Virtual router VRB. At any given time, one router serves as Master for each Virtual Router, and the other router serves as Backup, for example, router R1 is the Master for Virtual Router VRA, and router R2 is the Master for Virtual Router VRB. Upon initialization, both routers R1 and R2 initially act as Backup routers. After a period, the routers R1 and R2 realize that no VRRP Advertisements are being transmitted, indicating that no Master is present. The routers R1 and R2 respond by broadcasting their own Advertisements, and comparing the priorities of broadcast Advertisements with their configured priorities. The router having the highest configured priority for each Virtual Router assumes Master status for that Virtual Router, and the other router assumes Backup status.

Claims 1-7

Independent claim 1 is directed to "[a] method for building up backup master

information." Claim 1 recites:

> (a) receiving connection information from at least one of a plurality of
> slaves in a network;
> (b) determining a priority of said at least one of the plurality of slaves to
> be used as a backup master, when a network master disappears, according to the
> received connection information; and
> (c) announcing the determined priority to at least another one of the
> plurality of slaves.

Applicant respectfully submits that claim 1 would not have been anticipated by or

rendered obvious in view of Wils. In particular, Applicant respectfully submits that it is quite

clear that Wils does not teach or suggest "<u>determining a priority</u> of said at least one of the

plurality of slaves to be used as a backup master, when a network master disappears, <u>according</u>

<u>to the received connection information</u>", as claimed. Instead, as discussed at column 5, lines 26-

28 of Wils, "[t]he Backup routers are assigned different priorities for assuming Master status

when necessary, as described in RFC 2338." That is, Wils does not disclose how the priority of

the routers is determined but instead simply indicates that the priority of the routers is

preconfigured.

As discussed above, column 5, lines 51-54 of Wils (cited by the Examiner in support of

the rejection of claim 1) discloses that when a Backup router determines that a Master router is

unavailable based on VRRP Advertisements broadcast by the Master router, the Backup router

having the highest configured priority for each Virtual Router assumes Master status for that

Virtual Router. Column 6, lines 57-63 of Wils discloses that in the case of initialization where

no router has attained Master status, the routers broadcasting their own Advertisement messages,

and compare the priorities of broadcast Advertisements with their configured priorities such that

the router having the highest configured priority for each Virtual Router assumes Master status

for that Virtual Router, and the other routers assume Backup status.

Accordingly, Wils simply discloses that the priorities of the routers is preconfigured and

when a Master router is not available or present, a router having the highest priority assumes

Master status. Thus, Applicant respectfully submits that independent claim 1 should be

allowable since the cited reference does not teach or suggest all of the features of the claimed

invention.

With regard to dependent claim 3, the Examiner concedes that Wils does not disclose

"the received connection information includes received signal strength indication (RSSI) and/or

link quality information". In view of this deficiency, the Examiner cites Erekson for disclosing

the use of RSSI in communication devices and asserts that "[i]t would have been obvious ... to

combine the teachings of Wils and Erekson because Erekson's teaching of using received signal

strength indication enables Wil's method to support devices used for voice applications to

measure the strength of the incoming signal." However, Applicant respectfully submits that it is

quite clear that Erekson does not provide any teaching or suggestion which would motivate one

of ordinary skill in the art to modify Wils to determine a priority of at least one of the plurality of

slaves to be used as a backup master, when a network master disappears, according to signal

strength indication (RSSI) and/or link quality information received from the at least one of the

plurality of slaves.

In the present case, the Examiner has not provided any objective reasons why one of

ordinary skill in the art would have been motivated to modify Wils based on Erekson to produce

the claimed invention.[1] The mere fact that Erekson discusses the use of RSSI in wireless devices

(which is well known in the art) does not provide any motivation or suggestion to determine a

priority of at least one of the plurality of slaves to be used as a backup master, when a network

master disappears, according to RSSI received from the at least one of the plurality of slaves.

Further, RSSI is not even a parameter which would be used in a wired network such as Wils'

network.

With regard to dependent claims 4 and 5, the Examiner concedes that Wils and Erekson

do not disclose the claimed features but instead cites Lynch. However, Lynch does not make up

for the deficiencies of Wils and Erekson. In particular, if Lynch does not teach or suggest if at

least one of the plurality of slaves has a higher RSSI or link quality value than another one of the

plurality of slaves, the at least one of the plurality of slaves is given a higher priority, which is

used to choose a new network master.

Lynch discloses a cellular telephone system in which priority of selective service

provider acquisition during roaming is given to those service providers associated with the home

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[1] "To support the conclusion that the claimed invention is directed to obvious subject matter, either references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference." *Ex parte Clapp* 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

service provider and identified by System Identification (SIDs) numbers. The SIDs of available

system providers are compared to a list contained within the subscriber unit and selection is

made based upon a priority of those system providers having arrangements with the home system

provider. Column 9, lines 15-21 of Lynch (cited by the Examiner in support of the rejection of

claims 4 and 5) simply discloses priority can be based upon RSSI or other system characteristics

of the service provider. Thus, similar to Erekson, Applicant respectfully submits that it is quite

clear that Lynch provides absolutely no teaching or suggestion which would motivate one of

ordinary skill in the art to modify Wils to include the claimed feature that if at least one of the

plurality of slaves has a higher RSSI or link quality value than another one of the plurality of

slaves, the at least one of the plurality of slaves is given a higher priority, which is used to

choose a new network master.

Lastly, Johansson do not teach or suggest the above-discussed features of the claimed

invention which are missing from Wils, Erekson and Lynch.

Accordingly, for at least the above reasons, Applicant respectfully submits that

independent claim 1, as well as dependent claims 2-7, should be allowable over Wils, alone or in

combination with Erekson, Lynch and/or Johansson.

<u>Claims 8-13</u>

Amended independent claim 8 is directed to "[a] method for designating a new master of

a network when a preexisting network master disappears." Claim 8 recites:

        (a) determining at a slave whether the preexisting network master has
    disappeared;

(b) if the preexisting network master has disappeared, checking a rank assigned to the slave <u>by the preexisting network master which determined the rank</u> based on connection information received from the slave<u> by the preexisting network master</u>, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master; and

(c) changing the slave to the new network master if it determined that the rank is highest of any one assigned to a plurality of slaves.

Applicant respectfully submits that Wils does not teach or suggest that "if the preexisting network master has disappeared, checking a rank assigned to the slave <u>by the preexisting network master which determined the rank</u> based on connection information received from the slave<u> by the preexisting network master</u>, wherein the rank is used for choosing a new network master and is received before the disappearance of the preexisting network master", as claimed. As discussed above, nowhere does Wils teach or suggest that the preexisting network master determines and assigns a rank assigned to a slave based on connection information received from the slave. Instead, Wils' discloses that when a Master router is unavailable, the routers broadcast their own Advertisement messages and compare the priorities of broadcast Advertisements with their configured priorities such that the router having the highest configured priority for each Virtual Router assumes Master status for that Virtual Router, and the other routers assume Backup status (see column 5, lines 51-54 and column 6, lines 57-63 of Wils).

Further, Ying and Akyol do not teach or suggest this feature of the claimed invention which is missing from Wils.

Accordingly, Applicant respectfully submits that claim 8, as well as dependent claims 9-13 should be allowable over Wils, alone or in combination with Erekson, Ying and/or Akyol.

Claim 14

Amended independent claim 14 is directed to "[a] method for establishing a connection between a new master and a remaining plurality of slaves of a network when a preexisting network master disappears." Claim 14 recites:

(a) checking whether the preexisting network master has disappeared;

(b) checking backup master rank information <u>which is assigned to the slave by the preexisting network master which determined the backup master rank information based on connection information received by the preexisting network master from the slave</u>, when it is determined that the preexisting network master has disappeared in the step (a);

(c) attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have a highest priority, according to the backup master rank information; and

(d) remaining as one of the remaining plurality of slaves if a connection with the new network master is established in the step (c).

Applicant respectfully submits that Wils does not teach or suggest "checking backup master rank information <u>which is assigned to the slave by the preexisting network master which determined the backup master rank information based on connection information received by the preexisting network master from the slave</u>, when it is determined that the preexisting network master has disappeared", as claimed. That is, nowhere does Wils teach or suggest that the preexisting network master determines and assigns a rank assigned to a slave based on connection information received from the slave.

Accordingly, Applicant respectfully submits that claim 14 should be allowable over Wils.

New Claims

By this Amendment, Applicant has added new dependent claims 15 and 16 which recite that the connection information received from the slave by the preexisting network master includes received signal strength indication (RSSI) and/or link quality information. In addition to their dependencies on claims 8 and 14, new claims 15 and 16 should be allowable over the cited references for the same reasons discussed above with regard to claim 3.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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